KEYEKQVRNGRLF (SEQ ID NO: 13), DEFRRLLQNGKLF (SEQ ID NO: 14), SQYQNQAKNGILF (SEQ ID NO: 15), AEYREQMKNGRLS (SEQ ID NO: 16), or NEYRKLVRNGKLA (SEQ ID NO: 17), DEFRSQMKNGKLI (SEQ ID NO: 18).

43. The serine protease inhibitor according to claim 41, characterized in that the sequence between the second and third cysteines is selected from PQDKKFFQSLDGIMFINK (SEQ ID NO: 19), TRENDPIQGPDGKMHGNT (SEQ ID NO: 20, TRENDPVLGPDGKTHGNK (SEQ ID NO: 21), TREHNPVRGPDGKMHGNK (SEQ ID NO: 22), TRESDPVRGPDGRMHGNK (SEQ ID NO: 23), TRENDPIEGLDGKIHGNT (SEQ ID NO: 24), TRENDPIRGPDGKMHGNL (SEQ ID NO: 25), TRENDPVRGPDGKTHGNK (SEQ ID NO: 26), TRENDPIQGPDGKVHGNT (SEQ ID NO: 27), TRESDPVRDADGKSYNNQ (SEQ ID NO: 28), or TRESDPVRGPDGKTHGNK (SEQ ID NO: 29).

44. The serine protease inhibitor according to claim 41, characterized in that the sequence between the third and fourth cysteines of the domain is selected from AT, AL, AM, SM, or TM.

45. The serine protease inhibitor according to claim 41, having one of the following formulas:

- R_1-C-HEFQAFMKNGKLF-C-PQDKKFFQSLDGIMFINK-C-AT-C-R_2
- R_1-C-DDFKKGERDGDFI-C-PDYYEAVCGTDGKTYDNR-C-AL-C-R_2
- R_1-C-SAFRPFVRNGRLG-C-TRENDPVLGPDGKTHGNK-C-AM-C-R_2
- R_1-C-KEYEKQVRNGRLF-C-TRESDPVRGPDGRMHGNK-C-AL-C-R_2
- R_1-C-SQYQNQAKNGILF-C-TRENDPIRGPDGKMHGNL-C-SM-C-R_2
- R_1-C-NEYRKLVRNGKLA-C-TRENDPIQGPDGKVHGNT-C-SM-C-R_2
- R_1-C-SEYRKSRKNGRLF-C-TRENDPIQGPDGKMHGNT-C-SM-C-R_2
- R_1-C-SEFRDQVRNGTLI-C-TREHNPVRGPDGKMHGNK-C-AM-C-R_2

- R_1-C-SEYRHYVRNGRLP-C-TRENDPIEGLDGKIHGNT-C-SM-C-R_2
- R_1-C-DEFRRLLQNGKLF-C-TRENDPVRGPDGKTHGNK-C-AM-C-R_2
- R_1-C-AEYREQMKNGRLS-C-TRESDPVRDADGKSYNNQ-C-TM-C-R_2
- R_1-C-DEFRSQMKNGKLI-C-TRESDPVRGPDGKTHGNK-C-TM-C-R_2,

wherein R_1 is NH_2, an amino acid, or a peptide with up to 1000 amino acids, and R_2 is COOH, $CONH_2$, an amino acid, or a peptide with up to 1000 amino acids.

46. The serine protease inhibitor according to claim 41, characterized by containing

- a disulfide bridge between the first and fourth cysteines and/or between the second and third cysteines; or
- a disulfide bridge between the first and a fifth cysteine and/or between the second and fourth cysteines and/or between the third and a sixth cysteine.

47. The serine protease inhibitor according to claim 41, characterized by being a fragment of VAKTI-1 (SEQ. ID. NO. 1) or VAKTI-2 (SEQ. ID. NO. 2).

48. The serine protease inhibitor according to claim 47, characterized by being HF 6479 (SEQ. ID. NO. 3) or HF 7665 (SEQ. ID. NO. 4).

49. A nucleic acid coding for a serine protease inhibitor according to claim 41.

50. A medicament containing

- the serine protease inhibitor according to claim 41,
- a nucleic acid coding for the serine protease inhibitor, or
- the serine protease inhibitor and the nucleic acid coding for the serine protease inhibitor,

together with pharmaceutical vehicles.

51. The medicament according to claim 50, containing from 0.01 to 1000 mg per kg of body weight of the serine protease inhibitor.

52. Method of using the medicament according to claim 50, wherein the medicament is the serine protease inhibitor, for the treatment of acute or chronic cervix inflammations, inflammations of Bartholin's glands and other vaginal regions, tonsillitis, pharyngitis and laryngitis, acute or chronic inflammatory processes accompanied by excessive formation of mucus and the resulting acute emergency situations, postoperative bleeding due to hyperfibrinolysis, and for the prophylaxis of lung emphysema formation in deficiencies of α_1-proteinase inhibitor.

53. Method of using the medicament according to claim 50, wherein the medicament is the nucleic acid coding for the serine protease inhibitor, in gene therapy for the treatment and prophylaxis of acute or chronic cervix inflammations, inflammations of Bartholin's glands and other vaginal regions, tonsillitis, pharyngitis and laryngitis, acute or chronic inflammatory processes accompanied by excessive formation of mucus and the resulting acute emergency situations, postoperative bleeding due to hyperfibrinolysis, and lung emphysema formation in deficiencies of α_1-proteinase inhibitor.

54. Antibodies or antibody fragments against epitopes of the serine protease inhibitor according to claim 41.

55. Poly- or oligonucleotides which will hybridize to regions of the cDNA or corresponding RNA under stringent conditions and optionally prevent the expression of coding regions of the genes coding for the serine protease inhibitor according to claim 41.

56. A diagnostic agent containing at least one of the antibodies or antibody fragments according to claim 54.

57. A medicament containing the antibodies or antibody fragments according to claim 54 in therapeutically effective amounts.

58. Method of using the medicament according to claim 57 for the treatment of diseases involving too high an expression of a serine protease inhibitor, characterized by the antibodies or antibody fragments having a domain with four cysteines, and a sequence of 13 amino acids is present between the first and second cysteines, a sequence of 18 amino acids is present between the second and third cysteines, and a sequence of 2 amino acids is present between the third and fourth cysteines.

59. DNA coding for the serine protease inhibitor according to claim 41.

60. The DNA according to claim 59 having the SEQ. ID. NO. 5 or SEQ. ID. NO. 6.

REMARKS

Claims 41-60 are presented for consideration..

Claims 41-60 correspond to canceled claims 21-40, respectively, revised to add sequence identifiers, as required in the Office action.